

## PATENT ABSTRACTS OF JAPAN

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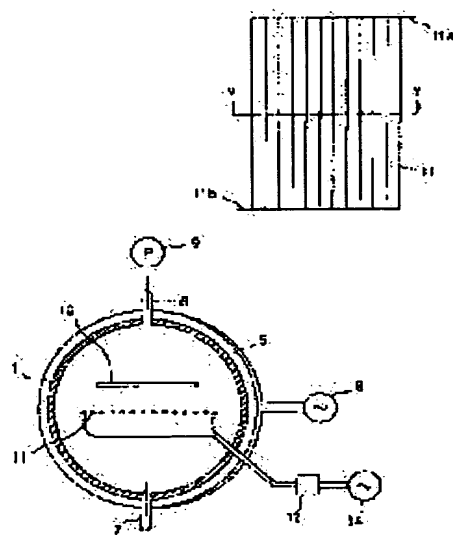
(21)Application number : 03-005329 (71)Applicant : MITSUBISHI HEAVY IND LTD  
(22)Date of filing : 21.01.1991 (72)Inventor : TAKEUCHI YOSHIKI  
MURATA MASAYOSHI  
KODAMA KATSU  
UCHIDA SATOSHI  
HAMAMOTO KAZUTOSHI

**(54) PLASMA CVD DEVICE****(57)Abstract:**

PURPOSE: To obtain a plasma CVD device appropriate to form a thin film over large-area by forming a discharge electrode with a ladder planar coil consisting of several wires and supporting a substrate parallel to the electrode.

CONSTITUTION: A discharge electrode 11 placed in a reaction vessel 1 is formed with the ladder-like planar coil consisting of several wires, and a substrate 10 is supported parallel to the electrode 11. A vacuum pump 9 is driven to evacuate the vessel 1, a gaseous reactant is supplied through an inlet pipe 7 to hold the vessel at a specified pressure, and a voltage is impressed on the electrode 11 from a high-frequency power source 14 to produce glow discharge plasma.

Meanwhile, an AC voltage is impressed on a coil 5 enclosing the vessel 1 from an AC power source 6 to generate a magnetic field orthogonal to the discharge electric field of the electrode 11. Consequently, the electric field close to the electrode 11 is intensified and uniformized, and a large-area amorphous silicon thin film is formed on the substrate 10 at a high rate.

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